

What is claimed is:

1. A method of manufacturing a platform, comprising the steps of:

5 providing a mold having first and second regions with an interconnecting line adhered to the first or second region; disposing a pin with a tip of the pin facing the mold; sealing the interconnecting line and the pin with a molding material;

10 removing the pin from the molding material to form a through hole in the molding material; and

releasing the interconnecting line and the molding material from the mold.

15 2. The method of manufacturing a platform as defined in claim 1, wherein:

the interconnecting line is a wire; and

both ends of the wire are bonded to the first and second regions.

20 3. The method of manufacturing a platform as defined in claim 2, wherein:

bonding pads are previously provided; and

both ends of the wire are bonded to the bonding pads.

25 4. The method of manufacturing a platform as defined in claim 1, wherein:

the interconnecting line is a conductive layer; and  
the conductive layer is formed over the first and second  
regions.

5 5. The method of manufacturing a platform as defined in claim  
1,

wherein a mold release agent is applied to at least one  
of the mold and the pin when the interconnecting line and the  
pin are sealed by the molding material.

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6. The method of manufacturing a platform as defined in claim  
1,

wherein the end of the pin is inserted into a hole formed  
in the mold.

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7. The method of manufacturing a platform as defined in claim  
6, wherein:

the first region of the mold is formed to be substantially  
planar; and

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the hole is formed in the first region.

8. The method of manufacturing a platform as defined in claim  
6, wherein:

the mold has a projected portion within the first region;

25

and

the hole is formed in a top surface of the projected  
portion.

9. The method of manufacturing a platform as defined in claim  
1,

wherein the first region of the mold projects further than  
5 the second region to form an indent in the molding material.

10. The method of manufacturing a platform as defined in claim  
1, wherein:

the mold has a projection;

10 the interconnecting line is adhered to a region of the  
projection; and

the projection forms a recess in the molding material.

11. The method of manufacturing a platform as defined in claim  
15 10, further comprising:

a step of filling the recess with a conductive material.

12. The method of manufacturing a platform as defined in claim  
1, wherein:

20 an electronic component is electrically connected to the  
interconnecting line and mounted over the mold; and

the molding material seals the electronic component  
together with the interconnecting line.

25 13. The method of manufacturing a platform as defined in claim  
1, wherein:

the mold includes the first region, the second region

provided in a position lower than the first region, and a third region provided between the first and the second regions; and

the interconnecting line is adhered to the first or second region and also to the third region in the step of providing

5 the interconnecting line.

14. The method of manufacturing a platform as defined in claim 1, wherein:

the mold has a plurality of the first and second regions;

10 a plurality of the pins are disposed with tips of the pins facing the mold; and

the plurality of pins are removed from the molding material to form a plurality of the through holes in the molding material.

15 15. The method of manufacturing a platform as defined in claim 14, further comprising:

a step of cutting the molding material.

20 16. A method of manufacturing an optical module comprising the steps of:

manufacturing a platform by the method as defined in claim 1;

inserting an optical fiber into the through hole formed  
25 in the platform;

mounting an optical element over the platform; and

electrically connecting the optical element and the

interconnecting line.

17. The method of manufacturing an optical module as defined in claim 16, further comprising:

5 a step of providing a resin to seal the optical element.

18. The method of manufacturing an optical module as defined in claim 17,

10 wherein as the resin, a resin having light transmitting properties is provided at least between the optical fiber and the optical element.

19. The method of manufacturing an optical module as defined in claim 16, wherein:

15 the mold has the first region, the second region provided in a position lower than the first region, and a third region provided between the first and the second regions;

the interconnecting line is adhered to the first or second region and also to the third region in the step of providing  
20 the interconnecting line; and

a semiconductor chip is provided in the third region of the platform.

20. A platform comprising:

25 a molded component formed of resin;

an interconnecting line in the molded component, at least part of the interconnecting line being exposed; and

a through hole in which an optical fiber is inserted is formed in the molded component.

21. The platform as defined in claim 20,

5 wherein an indent for receiving an optical element is formed in the molded component.

22. The platform as defined in claim 21, wherein:

10 the indent has a plurality of bottom surfaces in stepped form; and

the at least part of the interconnecting line is exposed on each of the bottom surfaces.

23. The platform as defined in claim 20,

15 wherein a recess is formed in the interconnecting line so that a bottom surface of the recess is exposed from the molded component.

24. The platform as defined in claim 23,

20 wherein the recess formed in the interconnecting line is filled with a conductive material.

25. The platform as defined in claim 20,

25 wherein an electronic component is incorporated in the molded component and is electrically connected to the interconnecting line.

26. An optical module comprising:

the platform as defined in claim 20;

an optical fiber inserted in the through hole; and

an optical element electrically connected to the

5 interconnecting line and mounted over the platform.

27. The optical module as defined in claim 26, having the platform as defined in claim 22, wherein:

the optical element is provided within the indent so as  
10 to face an end surface of the optical fiber facing in the direction of the indent; and

a semiconductor chip which is electrically connected to the interconnecting line is further provided within the indent to face a surface of the optical element opposite to the surface  
15 facing the optical fiber.

28. The optical module as defined in claim 26, further comprising a resin to seal the optical element.

20 29. The optical module as defined in claim 28,

wherein as the resin, a resin having light transmitting properties is provided at least between the optical fiber and the optical element.

25 30. An optical transmission device comprising:

a plurality of the platforms as defined in claim 20;

an optical element mounted over each of the platforms;

and

the optical fiber attached to each of the platforms,  
wherein the optical element is a light-receiving element  
or light-emitting element; and

5        wherein the optical element is electrically connected to  
the exposed part of the interconnecting line.

31.    The optical transmission device as defined in claim 30,  
wherein:

10        an indent for receiving the optical element is formed in  
the molded component;

         a semiconductor chip is mounted over each of the  
platforms;

15        the optical element is provided within the indent to face  
an end surface of the optical fiber facing in the direction of  
the indent; and

20        the semiconductor chip is electrically connected to the  
interconnecting line, and is provided within the indent to face  
a surface of the optical element opposite to the surface facing  
the optical fiber.

32.    The optical transmission device as defined in claim 30,  
further comprising a resin to seal the optical element.

25    33.    The optical transmission device as defined in claim 32,  
         wherein as the resin, a resin having light transmitting  
properties is provided at least between the optical fiber and



the optical element.

34. The optical transmission device as defined in claim 30,  
further comprising:

- 5       a plug connected to the light-receiving element; and  
      a plug connected to the light-emitting element.